

Ergogenic attributes of young and mature coconut (*Cocos nucifera* L.) water based on physical properties, sugars and electrolytes contents

ABSTRACT

The present work aimed to compare the main ergogenic attributes of two commercialized stages (young and mature) of coconut water (CW) obtained from four coconut varieties. The changes of electrolytes and sugars in CW upon maturation were quantified by inductively coupled plasma mass spectrophotometer and high-performance liquid chromatography, respectively. Based on the electrolyte profiling, potassium yielded the highest amount (ranging from 237.41 to 361.20 mg/100 mL) followed by sodium, magnesium, calcium, iron, manganese, copper, selenium, and zinc across all the maturity stages tested. For sugars, there were lower amounts of fructose and glucose, but a higher amount of sucrose with the maturation of the fruits. In conclusion, the amount of beneficial nutrients in the form of sugars and minerals was higher than that of young CW, and the ergogenic attributes of mature CW especially from MATAG variety (M-MATAG) were the best to be exploited further in the development of natural energy drinks.

Keyword: Coconut water; Ergogenic; Hydration; Electrolytes; Sugars